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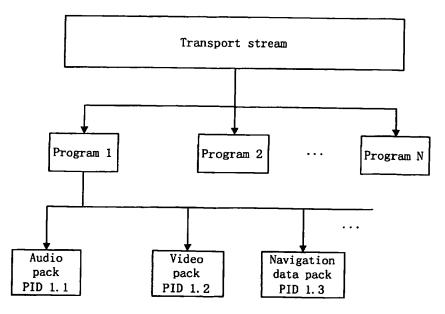
- (71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
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- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: DIGITAL BROADCAST METHOD AND SYSTEM FOR SUPPORTING DVD RECORDING AND RELEVANT RE-CEIVING AND RECORDING METHOD AND DEVICE



(57) Abstract: A digital broadcast method and system for supporting DVD recording, and relevant receiving and recording method and device are disclosed. A navigation data used for forming a DVD program is loaded into a private data stream of a TS transmitted by a broadcast system to let the system of the present invention be compatible with existing digital broadcast systems. A receiving end receives the navigation data when receiving audio data and video data. Therefore, it is possible to record the program in a DVD format so that a user enjoys the same feature-rich scanning function as issued DVSDs when replaying programs.



European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC $\frac{1}{7}$ H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 893 898 A (MATSUSHITA ELECTRIC IND CO LTD) 27 January 1999 (1999-01-27) column 1, line 5 - column 3, line 53 column 4, line 37 - column 7, line 19 column 8, line 32 - column 9, line 17 column 11, line 38 - column 12, line 54 column 14, line 15 - column 15, line 28; figures 1,4-6,8,11	1-20

Y Further documents are listed in the continuation of box C.	X Patent family members are listed in annex.
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Date of the actual completion of the international search	Date of mailing of the international search report
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Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk	Authorized officer
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Oberreich, C

INTERNATIONAL SEARCH REPORT

Form PCT/ISA/210 (continuation of second sheet) (January 2004)

International Application No

/IB 00006156 C.(Continuation) DOCUMENTS CONSIDERED T RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Category ° Relevant to claim No. X GB 2 351 888 A (SAMSUNG ELECTRONICS CO 1-20 LTD) 10 January 2001 (2001-01-10) page 1, lines 4-10 page 2, line 26 - page 3, line 6 page 5, lines 21-25 page 6, line 26 - page 7, line 8 page 8, line 14 - page 9, line 6 page 10, lines 9-18 page 10, line 28 - page 11, line 17 page 14, line 10 - page 16, line 16; figure 2 ISO/IEC CD13818-1 (MPEG 2 PART 1) ED -Α 2,6,9,13 INTERNATIONAL ORGANIZATION FOR STANDARDIZATION = ORGANISATION INTERNATIONALE DE NORMALISAT: "PROGRAM SPECIFIC INFORMATION" INFORMATION TECHNOLOGY - GENERIC CODING OF MOVING PICTURES AND ASSOCIATED AUDIO INFORMATION. PART 1: SYSTEMS. DRAFT INTERNATIONAL STANDARD ISO/IEC DIS 13818-1, GENEVA, ISO, CH, 1994, pages 36-45,106, XP002060689 section 2.4.4, Annex H.O, figures F-6 GB 2 350 514 A (SAMSUNG ELECTRONICS CO Α 1,5,10, LTD) 29 November 2000 (2000-11-29) 20 page 3, line 32 - page 5, line 8; figure 1 page 6, lines 28-33 page 10, line 32 - page 20, line 28 EP 0 863 669 A (MATSUSHITA ELECTRIC IND CO Α 1 LTD) 9 September 1998 (1998-09-09) the whole document

INTERNATIONAL SEARCH REPORT

International Application No Information op patent family members · · ·/IB D6156 Patent document uplication Patent family Publication cited in search report date member(s) date EP 0893898 Α 27-01-1999 JP 11041290 A 12-02-1999 JP 11041318 A 12-02-1999 CN 1210411 A 10-03-1999 EP 0893898 A2 27-01-1999 US 6556546 B1 29-04-2003 GB 2351888 Α 10-01-2001 KR 2000004855 A 25-01-2000 CN 10-09-2003 1441572 A 1249594 A ,B CN 05-04-2000 DE 19927711 A1 05-01-2000 GB 2341298 A ,B 08-03-2000 ID 23261 A 05-04-2000 JP 3357011 B2 16-12-2002 JP 2000105967 A 11-04-2000 JP 2003116088 A 18-04-2003 US 6504996 B1 07-01-2003 GB 2350514 Α 29-11-2000 2000059380 A KR 05-10-2000 CN 1266333 A 13-09-2000 DE 10010490 A1 14-09-2000 JP 3302970 B2 15-07-2002 JP 2000261802 A 22-09-2000 US 6724981 B1 20-04-2004 EP 0863669 Α 09-09-1998 DE 69708042 D1 13-12-2001 DE 69708042 T2 14-03-2002 0863669 A1 EP 09-09-1998 US 6292226 B1 18-09-2001 1206533 A ,C CN 27-01-1999

WO

9809437 A1

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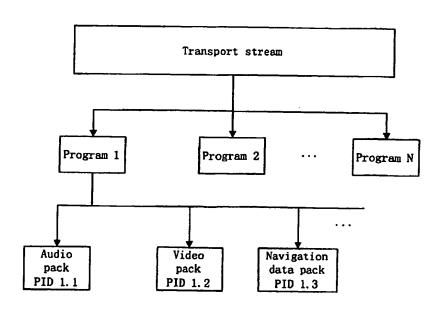
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- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT,

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